



Key Skills form an integral part of the challenge. Students are expected to demonstrate teamwork, problem solving and communication skills. The project encourages students to use portfolio evidence and to record and log their activities through the challenge.

We also use mathematical and scientific principles looking at materials, friction, energy, forces, geometry and many more aspects can be taught and investigated in the design, application and process stages.



Health and safety is paramount so our kit is designed to stringent specifications.

**WE OFFER  
ADVICE ABOUT  
ALL ASPECTS OF  
THE PROJECT.**

Many work experience and apprentice contacts have been made. Links to STEM and the Engineering Ambassadors'. It publicizes the good work done in education.

Overall the project encourages educational establishments to link with and involve the local and national business community.



**AS WELL AS WORKING WITH SCHOOLS  
WE ALSO WORK WITH THE MEDIA.**

Our many contacts with world leading companies and universities have enabled us to build many unique machines for TV shows. We try to involve young people as much as possible in our design and build process.

We have now achieved three **World Land Speed** records. One is our Gravity Racer record and then next Fastest Water Jet Propelled Vehicle and last Jet Luge record for the **Gadget Show**.



Our gravity racers have won across the world including setting the **Track Record for Red Bull in Mumbai**.

Our teams have designed and built some nine crazy land, water and air machines for the Gadget Show. We have also worked for **Red Bull, UMTV, Australian TV, The One Show** and many more.

Our Racers are guest runners at the **Goodwood Festival of Speed**.

Not a bad way to learn and achieve, gaining great qualifications and having so much fun.

**OUR SECRETS ARE, WORLD-BEATING  
STANDARDS WITH  
WINNING PARTNERSHIPS.**

**FORMULA  
GRAVITY**

**FORMULA  
GRAVITY**



**RACING FOR  
EDUCATION**

An exciting way to train young people from 13 years onwards in all aspects of an engineering project

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**■ THE UK NEEDS ENGINEERS.  
GREAT ENGINEERING CAREERS  
CAN AND HAVE STARTED HERE.**

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- THERE ARE NOW GRAVITY EVENTS ALL AROUND THE UK THAT YOU CAN ENTER.
- THESE ARE GREAT FUN AND GIVE A PURPOSE TO THE PROJECT.
- WINNING AT THESE EVENTS IS NICE, BUT THE MAIN PART IS TO DISPLAY YOUR RACER.

Gravity Racers are top of the range soapboxes, ideal for schools and colleges to design, build and race. 'F1 without the engine'. Full team back up is an educational bonus. You will need, designers, engineers, drivers, publicity etc.



### THE DEMAND FROM OTHER SCHOOLS AND COLLEGES FOR THE PROJECT GREW SO FORMULA GRAVITY LTD WAS FORMED.

We have now sent some **200 racer kits** to schools or colleges in the **UK** and exported to **Australia, India, New Zealand** and the **USA**, gaining many trophies but most important of all we are ticking all the boxes for students to learn about design and engineering with all the allied skills that go into a racing project.

Our racers conform to the national Technical Specification so that they will pass scrutineering in any UK, European, International or USA event. The project has been used for students from 13 years to university.



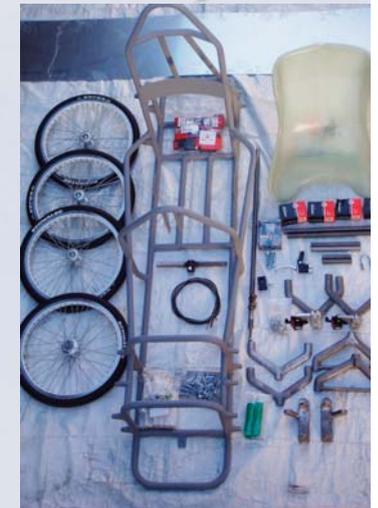
### FORMULA GRAVITY WORK WITH EACH SCHOOL / COLLEGE INDIVIDUALLY.

We can supply a complete racer kit to be built up into a running chassis.

Aerodynamics and the bodywork are up to the individual build. We of course give lots of advice.

Our spaceframes are already designed and welded up so that the hard bit is done. All the other parts are supplied. A build is ideal for an academic year and can be done as part of the curriculum or as a club.

Yearly rebuilds can then progressively improve your racer with learned improvements with a new cohort of students, improving the base knowledge year on year.



In 2001 Samuel Ward Academy decided to build its first gravity racer, the 'Phoenix'. This was designed and built in partnership with local industry. Gaining sponsorship from **Vauxhall VXR** it was raced at the prestigious **Goodwood Festival of Speed** beating some of the big motor companies. The school had caught the engineering / racing bug. In 2008 their next racer the 'Nimbus' set the World Land Speed record of 100 kph at Eastbourne. A record that they still hold.



- CAD DESIGN SYSTEMS FOR OUR RACER ARE NOW BEING PREPARED IN CONJUNCTION WITH PTC LTD.